

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Re application:  
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For: METHOD, APPARATUS AND PROCESSES FOR REAL-TIME INTERACTIVE ONLINE ORDERING AND RE-ORDERING AND OVER THE COUNTER PURCHASING WITH REBATE, SAVING, AND INVESTING PROCESSES

BACKGROUND OF THE INVENTION

FIELD OF INVENTION:

This invention is a Continuity in Application to Provisional Patent Applications titled: METHOD AND APPARATUS FOR DIRECT ORDERING AND AUTOMATIC RE-ORDERING OF PRODUCT AND SERVICES AND AUTOMATIC WAREHOUSING AND DISTRIBUTION OF PRODUCT, filed Jun. 24, 1998. And METHOD, APPARATUS AND PROCESSES FOR MANUAL, AUTOMATIC OR REMOTE ONLINE PURCHASING AND LOCAL, REGIONAL AND INTERNATIONAL OVER THE COUNTER PURCHASING WITH REBATE, SAVING, AND INVESTING PROCESSES, filed May 10, 1999. The present invention encompasses a method, apparatus and processes to allow for the real-time interactive online direct ordering and automatic re-ordering of goods and services by way of real-time interactive online showrooms (CyberShowRooms) and showcases (CyberShowCases) and directly communicating with the servicing salesperson (CyberSalesPersons). It also encompasses a means for interfacing with wholesaler warehousing and distribution systems. The purpose for the present invention is to bring forth a means for an extremely unique purchasing experience whereby individual workers and individual small businesses can purchase all types of goods and services and take advantage of the savings brought about by volume purchasing of these goods and services. It is further envisioned that the savings will be placed in worker retirement investing accounts thereby giving the worker added funds for retirement and other purposes. Further, research shows that men dominate Online purchasing because they tend to be impulse buyers.

as opposed to shoppers. Research also shows that online purchasers desire human interaction during the purchasing process, and if there was interaction between the sales person and customer, more goods and services would be sold. The present invention solves these problems.

### **Rebates, Saving and Investing:**

**The Need For Action.** American workers generally need three elements to ensure financial security in retirement: (1) Social Security; (2) an employer-provided pension plan; and (3) personal retirement savings. Currently, Social Security is the sole source of income for 18 percent of all elderly Americans, and the primary source for two-thirds of all senior citizens. For over five years, the President has worked with Congress to expand pension coverage, make pensions more secure, and simplify pension plan administration. Despite these achievements, the personal savings rate among Americans remains too low, and many workers do not have pension coverage through their employers. Research shows that:

More than 50 million employees -- half of All-American workers, are not covered by a pension plan;

Only 15 percent of private sector workers under age 25 are covered by a pension plan;

Only 21 percent of private sector workers earning under \$15,000 a year are covered by a pension plan;

Only 24 percent of full-time workers in firms with fewer than 100 employees are covered by a pension plan

## WRITTEN DESCRIPTION OF THE INVENTION

It is a primary object of the present invention to provide a means for real-time interactive online ordering and the re-ordering of goods and services and for automatic warehousing and distribution of goods.

### Purchasing

#### Online Purchasing

The Invention encompasses technology that will greatly facilitate the sale of goods and services while providing customers with a means to painlessly fund their Individual Retirement Accounts. The present invention will facilitate the offering of tens of thousands of products from several hundred manufacturers through online stores on the Internet, through local merchants and contractors and through merchants and wholesalers around the world. The Invention provides an online shopping experience that incorporates traditional shopping mall and mail order features into an interactive, easy-to-use and compelling online environment. Online technology, and the Internet in particular, is an advantageous medium for the selling of merchandise relative to traditional retail stores and mail-order catalogs. Leveraging online technology and the global reach of the Internet, the online retailing and wholesaling model of the present invention provides virtually unlimited online shelf space and the ability to reach a geographically unlimited customer base, without the costs associated with constructing traditional retail stores and distributing mail-order catalogs. The Invention's strategy is to offer quality merchandise, provide effective customer service, and capitalize on the inherent economies of the online retailing model by allowing the purchaser to purchase excess inventory and excess capacity from merchants and vendors of all types.

The Invention's online stores are accessed on the Internet. The Invention's online stores will provide high quality color video camera images and detailed information relating to products or services that are conveniently organized into departments by brand and category such as food products and services, housing products and services, apparel products and services, transportation products

and services, health care products and services, insurance products and services, entertainment and recreation products and services.

Shoppers can search for, browse and select products throughout the stores and place selected merchandise in virtual shopping carts that facilitates the process of collecting items, subtotaling purchases and reaching the purchase decision. Furthermore, The Invention will establish strategic relationships with manufacturers, which allow most products to be rapidly shipped directly from the manufacturer. Manufacturer direct shipping enables the company to avoid inventory-related risks; limit overhead costs and provides prompt delivery. As part of its marketing strategy, the company will form strategic alliance with local merchants and contractors pursuant to a marketing agreement. In addition, the company plans to establish strategic alliances with other online companies and begin a targeted advertising campaign to attract additional customers to the its online stores. It is believed that both online and traditional media exposure are critical to maximizing brand recognition and driving traffic to its online stores.

**Over The Counter Purchasing (Information Being Researched and Developed and Will Be Included In The Patent Application)**

**Remote Over The Counter Purchasing (Information Being Researched and Developed and Will Be Included In The Patent Application)**

## **PRODUCTS**

The present invention's store on the Internet will offer tens of thousands of products from several hundred manufacturers. The present invention's products or services will range in price from \$10 to \$5,500. Every product or service will be featured with a high quality color picture and detailed information relating to product or service specifics, service care or purchasing instructions. The present invention's store on the Internet is designed to accommodate the needs of both the browser and the directed shopper. The browser can view an array of products or services by simply clicking on one of the feature departments or service

categories. The directed shopper is able to quickly locate a specific product or service by category or brand by using the store's search function or store directory. By clicking on the picture of a product or service, the customer is presented with detailed information relating to product or service specifics, service, care or purchasing instructions.

The present invention seeks to provide a compelling shopping environment that will attract customers and encourage shoppers to purchase. The present invention intends to add sound and video features to its Internet store that will guide shoppers through the store and announce special offers. The present invention also aims to make the shopping experience as simple and convenient as possible. The present invention features a virtual shopping bag function that allows the shopper to accumulate merchandise for purchase while browsing through the store. Items can be added to or subtracted from the shopping cart at any time. As a registered member, the customer is able to retain items in the shopping cart indefinitely, even after leaving the store or logging-off. After selecting an item to purchase, the customer is prompted to complete an order. In choosing a payment method when placing an order, customers have the option of securely submitting credit card information online or telephoning or faxing the information to customer service representatives. The present invention also provides the option of payment by check or money order. The present invention sends e-mail notifications that confirm the order and shipment and promote special offers and events.

## Proprietary Technology

**Worldwide Shopping and Buying Processes** – To accomplish this strategy, we will acquire or affiliate with all types of stores, shops, and other of establishments from around the world. We will use these stores, shops, and establishments as CybershowRooms etc., and ship goods to customers from more centralized warehouses etc. (Information Being Researched and Developed and Will Be Included In The Patent Application)

## The Purchasing Facilitation System (PFS)

The PFS is a powerful microprocessor device that greatly increases the efficiency of the purchasing process and includes sub-circuits, relays other devices, sub-systems and components that compress and decompress bandwidth and connects to POTS, and wide bandwidth wireless, DSL, Fiber Optic, Cable, Satellite or any other signal conveying means. The PFS then allows the transmission and reception of real-time digital, optical, analog or any other type of data, video and audio signals or information to better facilitate the buying and selling of goods and services and enhancing the safety and security of buyers and sellers.

The present invention will be continually upgraded to interface with emerging technologies and new developments in web technologies with the objective of optimizing customer interfaces, web site features and operational systems. Technologies including systems that will enrich the online shopping experience and deliver more effective marketing messages, to provide customized services to shoppers in stores on the Internet. The present invention also encompasses methods to improve bandwidth technology which makes Online purchasing a more real time video experience for both, buyer and seller.

High quality data sensors, of varying type, are used to detect product information such as bar codes and other data. The sensors sense the data by various means such as optical scan, proximity, wigant, and processed and pre-amplifies the signal in the data processing circuit, from there, the data is then carried to data transmission components and over the wires or by other means to the central processing unit located in the Purchasing Facilitation System. There the data is further transmitted by radio wave, by satellite communications, by cellular telephone, or by regular telephone lines or by other means of communications to the Hub Server. There, it is received and processed by and appropriate volume purchasing is effected.

The Product Opening and Unsealing Station consists of opening means and data sensing means. As a can rotates as it is being opened, the data sensor automatically reads the

bar-code data, this data is automatically conveyed to the processing unit where it is stored in memory to be compiled and accessed as needed. As this data is accumulated, it forms the basis for future re-ordering of products.

The Product and Services Ordering and Re-Ordering System interfaces with the Purchasing Facilitation System (PFS) these devices combined, are the first devices developed from the ground up to aid owners and managers of small to medium sized residential and commercial buildings coordinate and better manage their purchasing of products and services to include various consumer goods and services to include security, fire and carbon monoxide alarms, telecommunications, natural gas, electricity, water, HVAC, and other energy conservation, building safety and maintenance operations. The PFS meters, monitors and controls all of the building systems relating to these operations and uses powerful software to integrate all systems information into a single server database located at local, area or regional Hub Servers.

The deregulation of utilities has brought about a need to change and improving the means, methods for managing utilities and protecting the inhabitants of buildings in urban areas. The system allows inhabitants to save on utilities and security while enjoying the comfort and safety of their buildings. The system combines into one device a method and apparatus to remotely monitor, control and manage the environment of buildings and to detect fire, smoke and intrusion; to measure fuel oil, water, natural gas and electricity; to remotely control the operation of furnaces, boilers, heat pumps, air conditioners, lights, appliances and hot water heaters; to prevent foul odors and clogging of plumbing pipes and the flooding of these buildings due to the building of grease, gelatin and other waste in these plumbing pipes to clog. Are problems across the country.

The PFS also includes systems to monitor purchasing peaks and valleys during the year to facilitate the purchasing and selling of excess inventory and capacity.

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## **On-line Systems Technology:**

The present invention is developing sophisticated information services delivery and shopper tracking systems by integrating third-party systems, when available, and by developing proprietary tools. The present invention's information systems will be viewed as four integrated systems: (i) a publishing system, (ii) a CCTV system, (iii) a selling system and (iv) and order processing system, all of which are supported by Relational Databases and other software.

**Publishing System.** The publishing system contains information about all items in the present invention's online stores, including retail price, cost, color and size characteristics, group information and all manufacturer related information. Once the manufacturers have offered their products to the present invention, the data sets are published (downloaded) to the present invention's online stores.

**Selling System.** The present invention's main selling system is the present invention's store on the Internet, which was designed to give customers a convenient and safe environment to effect their purchases. The present invention's store on the Internet will use copyrighted software and a proprietary Internet web server to handle the transactional events, queries and updates to the SQL Server database. All transactions are secured by using

**Ordering System.** The present invention's ordering system retrieves ordering information from selling systems, validates credit cards, processes the orders, creates and issues purchase orders to manufacturers and handles all post-sale marketing efforts. The ordering system also allows for orders to be taken over the telephone. The ordering system software was designed by the present invention to give customer service representatives instant access to all customer information, to automatically update all changes to a customer's order and inform the customer of order status by automated e-mail communications. The customer service and marketing departments will access this customer profile information to search and analyze customer demographics and buying patterns in order to suggest new programs and offers to customers. The system will also communicate with the warehousing

facilities in real time for updates on order shipments and stock status positions.

## CyberShowRoom

This segment of the present invention interfaces with the PFS and relates generally to closed-circuit television purchasing systems and pertains more particularly to such systems in which a television camera is mounted on a carriage for movement along a rail or track and in which the system is subject to automatic control by a computer or the like.

It is known to provide closed circuit television purchasing systems using either cameras in a fixed location or cameras that are mounted for movement along a track, dome or stand. It is also known, in the case of a system using a fixed-position camera, to provide automatic acquisition of a product object in response to a command signal or the like. Assuming that data has previously been stored in the control system to indicate the required direction of view and appropriate zoom and/or focus condition for the camera to provide an image of the product, the control system can implement an immediate adjustment to the camera direction, zoom condition, etc. so that an image of the product is provided by the camera within a very short time.

However, when the system utilizes a moving camera, such as a camera mounted on a carriage that travels along a rail, the camera may be located at any arbitrary position in its range of movement at the time a command is received. Since the camera location at the time of the command cannot be known in advance, it is not possible to store in advance data defining a particular direction and zoom condition of the camera which will enable the camera to provide an image of the product from the position of the camera at the time of the command.

The present invention also includes methods of simulating the motion of real-time shopping through the use of pan, tilt and zoom cameras which enhance product presentation through motion etc.

In the case of an operator-attended purchasing system, the human operator may attempt to respond to the command signal by operating system controls to reposition the camera carriage and to adjust the camera direction, etc. so that an image of the product is obtained. However, the variety of possible camera positions and directions-of-view may lead to disorientation on the part of the operator. Also, if the system is set up with multiple products for which commands may be actuated, the operator may have difficulty identifying the particular product to which the command pertains. As a result, the human operator's response to the command may be too slow, thus causing the operator to become frustrated.

While it might be proposed to define a predetermined position along the track to which the camera should be moved in response to a command which pertains to a particular product, and then an appropriate direction of view and zoom condition data could also be stored for providing an image of the product from that predetermined position, such an approach carries the disadvantage that a significant amount of time may be required to move the carriage to the predetermined position from the position of the carriage at the time the command is received. Even if automatic camera direction and zoom adjustments are performed before or during carriage movement so that the camera will be in an appropriate orientation and zoom condition to provide the image of the product as soon as the predetermined carriage position is reached, still product acquisition cannot take place during the time the carriage is in motion, and product acquisition thus may be substantially delayed.

The present invention also includes means and methods whereby shoppers/buyers virtually shop at regional as well as international establishments without leaving the comfort of their homes and businesses. However, purchased products are pre-positioned at strategic locations to speed up delivery to the purchaser etc.

### CyberShowCase

This segment of the present invention interfaces with the PFS and relates to a new and improved merchant's CyberShowCase which has for its principal purpose to provide a moving and adjustable CCTV system for motorized revolving platform and hanger systems on

which the product to be pictured rests and also for a multi-colored backdrop system which is positioned behind the product in the line of sight of the camera. The multi-colored backdrop is preferably illuminated from behind with rear view projection or from the front with either a white light or a light having appropriate color filter. The projected or multi-colored backdrop provides a wide variety of scenes as background for the product being photographed.

The present invention encompasses means and methods of giving the presented product motion through the use of pan-tilt-zoom cameras and moving platforms and racks located in the CyberShowCase. Not only do these devices provide motion, but they also present multiple viewing angles to make product presentation more appealing.

The CyberShowCase may be used either as a stationary or mobile showcase. Accordingly, it is a principal product of the present invention to provide an equipment bay on wheels, which contains the equipment and systems to facilitate CCTV production.

Another feature of the present invention is the fact it is readily transportable, easily adjustable in many different positions and adaptable to a wide variety of conditions to photography products.

## CyberSalesperson

The present invention encompasses means and methods of simulating the shopper actually being in the showroom with the CyberSalesPerson showing the product. The CyberSalesPerson is equipped with the means to effectively communicate (audio and video) online real-time with the shopper (retail customer) or buyer (wholesale customer) being serviced. These systems interface with the PFS. (Information Being Researched and Developed and Will Be Included In The Patent Application)

### BRIEF DESCRIPTION OF THE DRAWINGS

The foregoing and other objects, aspects, uses, and advantages of the present invention will be more fully appreciated as the same becomes better understood when considered in connection with the following a invention drawings, in which:

Fig. 1 Illustrates the modular structure of the Real-time interactive online product and services ordering and re-ordering system in accordance with the present invention. The diagram shows a remote re-ordering module 1, a product opening/unsealing station with a ordering module 2, with a barcode type reader 2A, and a RF type reader 2B, a monitor 3(touchscreen or regular) and a purchasing facilitation system 4

Fig. 2 Illustrates Online Buyer's and Seller's (CyberSalesPerson) Sub-Systems; The Buyers Sub-System includes a product opening/unsealing station with a ordering module 2, with a barcode type reader 2A, and a RF type reader 2B, a camera system 6 with microphone 6C and video display monitor 3 interfaced with the PFS 4 that communicates 5 & 6A by wireless, online or otherwise with the Seller Sub-System (which includes various cameras such as; a finger bracket camera 8 - 8E, eyeglass, cap, beeper etc covert cameras 9A and various other camera systems which are mounted on tripods 10, or any other type stand or mount) the CyberShowCase and the CyberShowRoom systems. The CyberSalesPerson is also equipped with a R/T capable Hi-Quality headset 7, that has a microphone 7A, earphones 7B and mini-radio unit w/ antenna 7C.

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Fig. 3 Illustrates the Real-time interactive online purchasing facilitation system; The PFS consist of the main computer/server with recording systems module 4E, the alarm, metering etc, microprocessor and universal bar-code ROM microprocessor systems module 4H, the control/relay module 4I, the microprocessor bus 4J, the computer/server bus 4F, the control/relay bus 4L, the power bus 4N, and the aux. battery 4M.

Fig. 4 Illustrates the Real-time interactive online product and services re-ordering modules s 1, interfacing with a purchasing facilitation system 4 by way of direct wire 4A, IF Signal 4B, RF Signal 4C and Laser Signal 4D to the PFS communication bus 4K, whereby signals are processed in the communications module 4G..

Fig. 5 Illustrates a systems diagram showing the Real-time interactive online product and services ordering re-ordering modules and PFS, which are located in Homes. The diagram shows a layout of the system modules with a signal 11A from the PFS 4 being transmitted to the Area/Local Hub 12 where wholesale purchases are made for appliances, clothing, groceries and many other types of consumer and small business goods and services. Area/Local Business Owners can also advertise other goods and services here instead of with costly TV, Yellow Pages etc. The Regional Hub Server 13 facilitates non-local wholesale purchases. To include security, fire and carbon monoxide alarm monitoring services, telecommunications, natural gas,

electricity, fuel oil, and other HVAC products and services.

Purchase funds are debited from the purchasers account at the system credit union 14 with payment going to the sellers bank 15, and rebates going to the purchasers investment company 16. The Certified Purchasing Planner 17, uses a system computer 17A to monitor and advise the purchaser of the best means to increase rebates etc.

Fig.6 Illustrates a systems diagram showing the Merchant Real-time interactive online product and services ordering re-ordering modules and PFS, which are located in Small Business Buildings.

The diagram shows a layout of the system with a card reader 1, and terminal 9, interfacing with the PFS 4, which can allow the use of credit cards 1B, debit cards 1A, smart cards 1C or any other type card. The signal from the PFS 4 being transmitted to the Area/Local Hub 12 where wholesale purchases are made for appliances, clothing, groceries and many other types of consumer and small business goods and services. Area/Local Business Owners 18 can also advertise other goods and services here instead of with costly TV, Yellow Pages etc. The Regional Hub Server 13 facilitates non-local wholesale purchases. To include security, fire and carbon monoxide alarm monitoring services, telecommunications, natural gas, electricity, fuel oil, and other HVAC products and services. Purchase funds are debited from the purchasers account at the system credit union 14 with payment going to the sellers bank 15, and rebates going to the purchasers

investment company 16. The Certified Purchasing Planner 17, uses a system computer 17A to monitor and advise the purchaser of the best means to increase rebates etc.

Fig.7 Illustrates a systems diagram showing the Real-time interactive online product and services ordering and re-ordering System and PFS. The diagram shows a layout of the system modules located in Homes 11 and Small Business Buildings 18 with a signal from the PFS 4 being transmitted to the Area/Local Hub 12 where orders from all over the area are combined and volume purchases are made from local vendors for appliances and gifts 12A, clothing 12B, groceries 12F, autos 12 C, sports and entertainment 12D and many other types of consumer and small business goods and services 12E. Area/Local Business Owners can also advertise other goods and services here instead of with costly TV, Yellow Pages etc. The Regional Hub Server 13 facilitates non-local volume purchases. To include security, fire and carbon monoxide alarm monitoring services 13E, telecommunications 13G, natural gas and fuel oil 13B, electricity 13A, airline tickets etc. 13D and other products 13C and 13F and services.

Fig.8 Illustrates our Real-time interactive online, over-the-counter purchasing systems network diagram. The diagram shows the product and services ordering and re-ordering System and PFS, which are located in a variety of establishments that represent the various type businesses (food 20A, housing 20B, apparel 20C,

transportation 20D, health care and insurance 20E, entertainment and recreation 20F) the government uses for economic indicators. The diagram shows all types of persons that make over-the-counter purchases 19, who are our customers and who make over the counter purchases from merchants who have our PFS 4. The diagram further shows the interface between the PFS 4 and network local/area mainframes 12 and regional super computers 13. The mainframe 12 and super computer 13 contain as much as possible the complete universal barcode database and they constantly monitor and query each other as well as the databases of affiliate wholesalers 13C and manufacturers 13H.

Fig. 9 Illustrates the WorldWholesaler Concept for Merchant Buyers

Fig. 10 Illustrates the WorldMall Concept for Individual Shoppers

Fig. 11 Illustrates a Top View of the CyberShowRoom Concept. It shows the interior of a shop, showroom, or tradeshow booth 28 in which there is installed a CCTV purchasing system in accordance with the present invention. The CCTV purchasing system includes pan, tilt, and zoom cameras that are mounted on a track 28C , or in domes 28B or on a variety of stands 28F. The pan, tilt, zoom cameras are movably supported on an elongated tracks or rails or in domes which are suspended from the ceiling or from the walls of the CyberShowRoom. Signals from the cameras are processed, digitally recorded in the PFS 4 and transmitted as the situation dictates. These cameras allow real-time interactive online viewing of

the shop, showroom, or tradeshow booth floor or see inside glass counters 28D and showcases 28E from anywhere in the world. The systems brings movement and interactive functionality to a web site allow users to see and interact with each other and to virtually visit and browse through venues worldwide.. In essence, our video systems become proxy eyes and our audio systems become the proxy ears and voices of our clients. Thus, if two or more people are a long distance apart and have a need for face to face discussion, or a need to view information or objects while conducting the face to face discussion, using our technology will save them a great deal of time and money. Our systems will be easy to use and relatively low in cost.

**Fig. 12 Illustrates an End View of the CyberShowRoom Concept**

**Fig. 13 Illustrates the Remote Operated Online Product Demonstration System (CyberShowCase) Concept Consisting of:**

A merchandise display apparatus which allows real-time interactive online viewing of objects or information. The apparatus includes means for a shopper to use his/her PFS and call up the unit, view the merchandise and if desired, get a much better full view of the displayed merchandise by controlling the motorized revolving hanger rack 29B, the motorized revolving platform 29H, cameras 29D, and other components of the unit. During normal operations, the cameras 29D view the merchandise from a position forwardly of the motorized revolving hanger rack 29B and the motorized revolving platform 29H which is above the equipment bay 29I of

the unit. Displayed merchandise is illuminated by one or more track mounted floodlights 29C and adjustable light rails 29F. To the CCTV camera 29D, the displayed merchandise stands out in space, the motorized revolving platform 29H and motorized revolving hanger rack 29B being concealed by the direction from which the product is viewed. When it is desired to position the camera above the product the lower edge of the backdrop may be curved forwardly all along the motorized revolving platform 29H thereby concealing the motorized revolving platform from the picture taken. A principal feature of the present invention is the means for changing the scene consisting of a multi-colored back-light system 29M, a rear screen projection system 29N, and a white backdrop system 29O. The unit's communication system is contained in the PFS equipment bay 29I allows full-duplex communications with signals being conveyed through the system antenna 29A or by some other means. The unit also allows wide adjustability of components, the pan, tilt, and zoom cameras 29D are adjustable in elevation by moving the cameras mounting slide along the adjustable camera racks w/conduit 29G.

**Fig.14 Illustrates Normal Distribution and Mark-Up**

**Fig. 15 Illustrates Individual Internet Purchasing and Distribution Cycle**

The present invention 's online stores will provide high quality products or services that are conveniently organized into departments by brand and category such as food products and services, housing products and services, apparel products and

services, transportation products and services, health care products and services, insurance products and services, entertainment and recreation products and services.

**Fig. 16 Illustrates Commercial Purchaser Internet Purchasing and Distribution Cycle**

**Fig. 17 Illustrates How Mark-Up is Eliminated and Rebates Added**

**Fig. 18 Illustrates Over-The-Counter Purchasing and Rebates**

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